

on said predetermined plane and an optical device which changes an intensity distribution of said illumination beam on a pupil plane of said illumination optical system; and

a movable member arranged to relatively move said mask with respect to said slit area on said predetermined plane during scanning exposure on a substrate with said illumination beam through said mask, and to hold said mask at a position on or near said predetermined plane.

56. (Amended) An apparatus according to claim 55, wherein said optical device comprises a stop member arranged between said fly-eye type integrator and said predetermined plane and arranged to limit said illumination beam in said illumination optical system.

57. (Amended) An apparatus according to claim 56, wherein said stop member is substantially arranged on said pupil plane of said illumination optical system.

58. (Amended) An apparatus according to claim 57, wherein said stop member comprises a plurality of aperture stops having shapes that are different among them, and said intensity distribution of said illumination beam on said pupil plane is changeable.

78. (Twice Amended) A scanning exposure method comprising the steps of:
illuminating a slit area on a predetermined plane on which a mask is arranged with an illumination beam emerging from a fly-eye type integrator having a plurality of optical elements each of which has a cross sectional shape substantially equal to a shape of said slit area on said predetermined plane;
changing an intensity distribution of said illumination beam on a pupil plane of an illumination optical system that includes said fly-eye type integrator; and
relatively moving said mask and a substrate with respect to said illumination beam, respectively, to perform scanning exposure of said substrate with said illumination beam through said mask.